

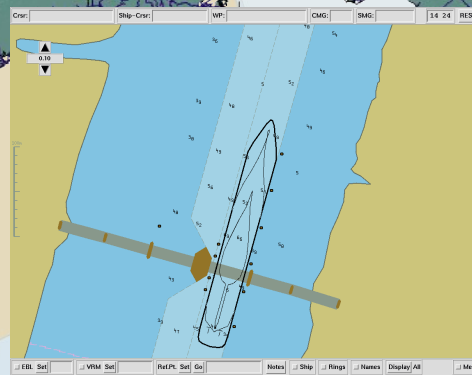
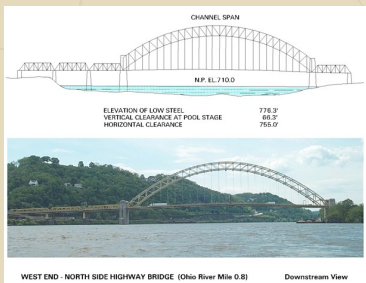


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*Anthony Niles,
Program Manager
ERDC-TEC*



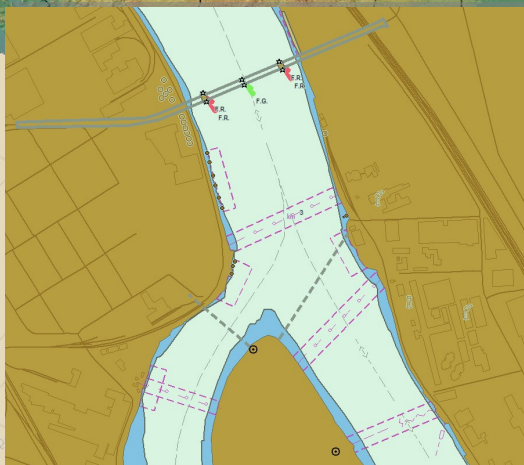


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- **IENC coverage completed, published and maintained; 56 cells covering 4,225 miles**
- **IENC coverage under development; 1,250 miles**
- **2,520 miles remaining**



**Ohio River at
Pittsburgh**

IENC Coverage



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IENC Project Delivery Team

- **ERDC-TEC, Manager, Tony Niles**
- **New Orleans, MVD Lead, Ralph Scheid Ladue**
 - Memphis, Jennifer Redden
 - Rock Island, Jim Aidala
 - St. Louis, Bob Mesko Leblanc
 - St. Paul, Paul Machajewski
 - Vicksburg, Cliff Geter William Penn
- **Mobile, Hal Gates**
- **ERDC-CHL, Michael Winkler**
- **U.S. Coast Guard, NAVCEN and 8th District**
- **University of New Hampshire, consultant**
- **3001, Inc./ IIC International, contractor**
- **Photo Science Inc, contractor**
- **Louisville, LRD Lead, Denise**
- **Huntington, Greg Jones**
 - Nashville, Wayne Ligon
 - Pittsburgh, Steve
- **Little Rock, SWD Lead,**
 - Tulsa, Larry Prestien

IENC Team



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FY06 Project Structure

Project

Central QA &
Publishing

AtoNs Work

Coastal FW
Development

Std's Development &
Coord

Updating

Software & Hardware

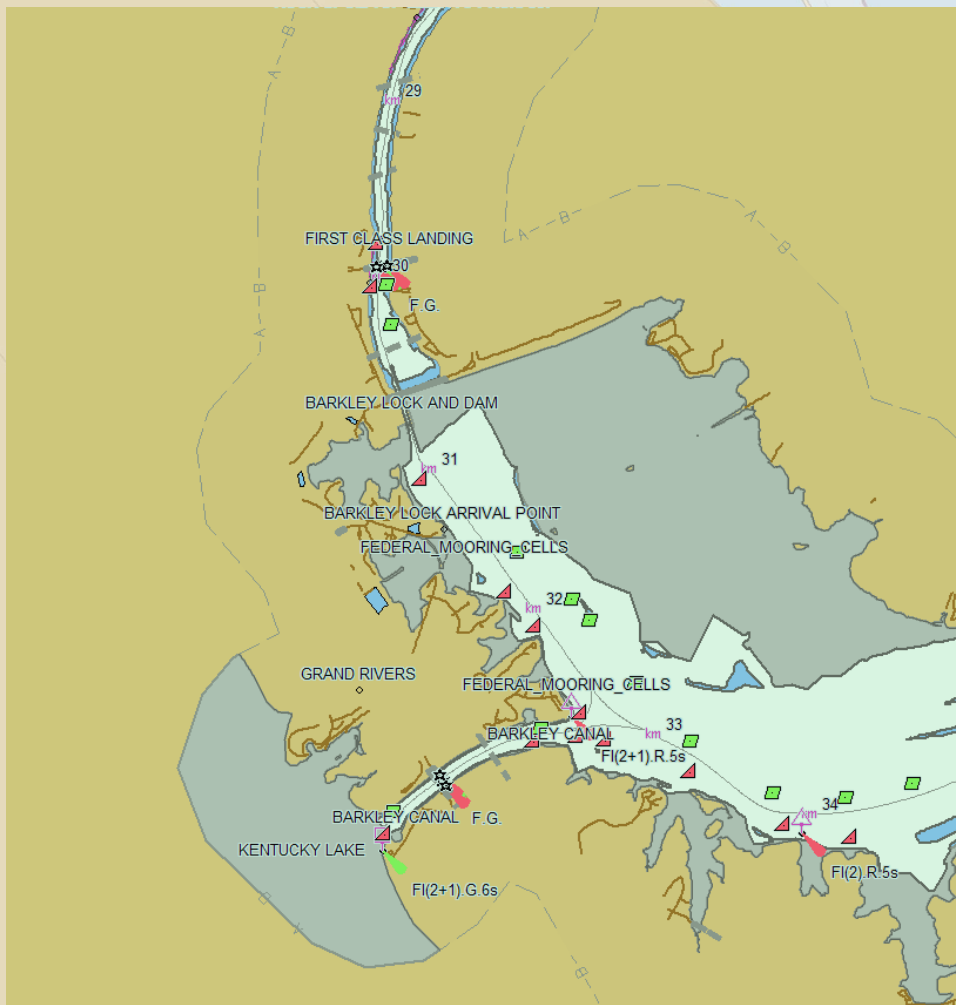
Management



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Cumberland River

- Status: USCG procuring chart systems for river tenders to enable buoy data collection - contract had to be re-competed.
- Problem: Cumberland cells *require* buoys for publication; no other feasible way to delineate channel.
- Solution (temporary): Buoy survey from Corps vessel, with USCG approval, used to chart buoys.



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COAST GUARD AND MARITIME TRANSPORTATION ACT OF 2004 SEC. 410. ELECTRONIC CHARTS.

Mandates carriage of electronic charts by several classes of vessels operating in U.S. waters, including towing vessels over 26 ft overall length and at least 600 horsepower.

Issues to be resolved with Coast Guard and NOAA;

- will commercial IENCs be certified to meet carriage requirements?
- who will certify non-government charts?
- will certification process be the same as with NOAA ENC's?
- are display and performance standards needed?

***** Issues must be resolved by January 2007 - deadline for USCG rule!**



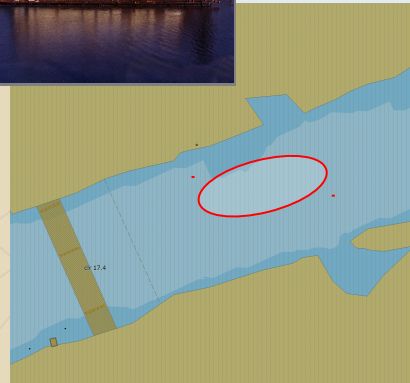
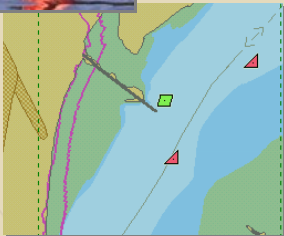
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Features likely to change more than once a year;

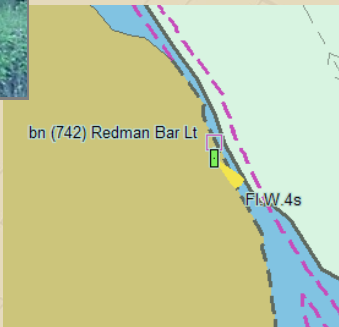
Buoys



Contours/Depth Areas



Fixed Aids to Navigation



Sailing Line

Updating



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FY06 Update Plan
Begin production of S-57 updates for some areas, testing contract and in-house capabilities.

- **Contract:** 3001/IIC to perform ongoing updates for Mississippi, Red, Illinois, Atchafalaya, BWT using district field data and USCG Notices to Mariners

U35LM601.000 U35LM716.000
U35LM829.000

U35LM601.001 U35LM716.001
U35LM829.001

U35LM601.002 U35LM716.002
U35LM829.002

U35LM601.003
U35LM829.003

U35LM829.004

- **In-House:** LRL and TEC to perform ongoing updates for Ohio, Cumberland, and Green using district field data and Notices to Mariners

Beyond FY06: Most likely, majority of cell updates to be performed by contract, with some in-house activities to retain expertise.

Updating



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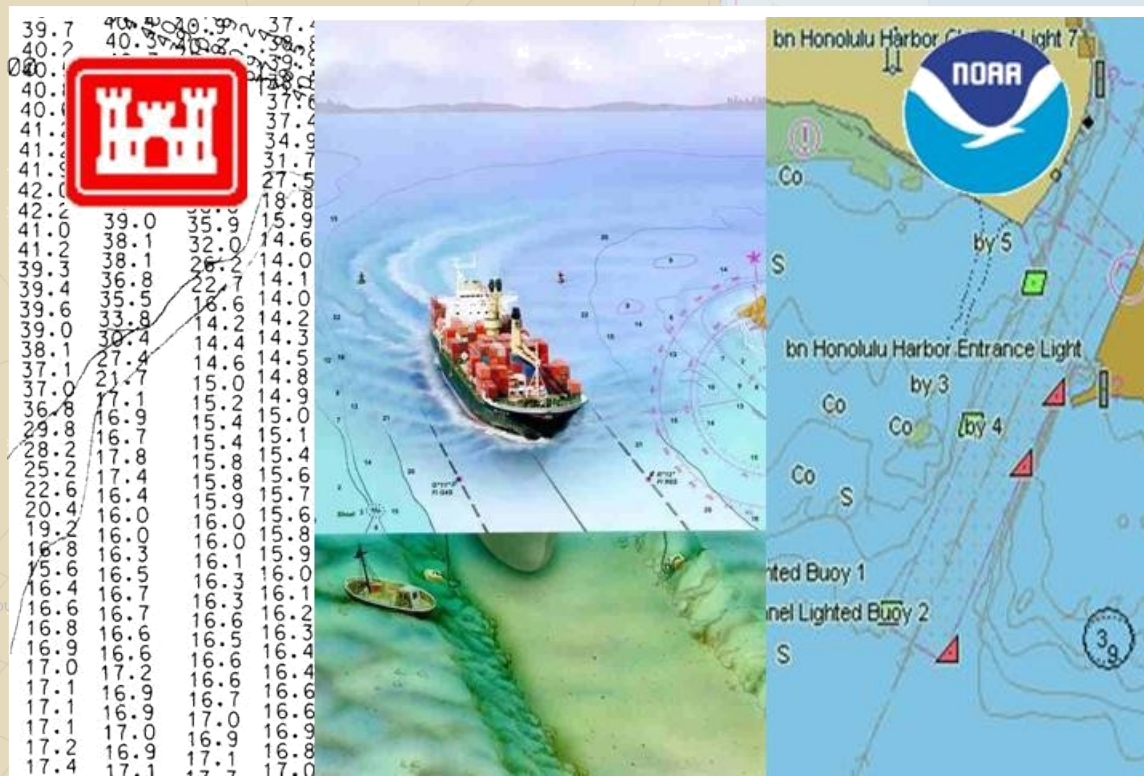


Inland Electronic Navigation Charts

Coastal Channel Framework

Complete and accurate reference for all coastal and Great Lakes channels,

- **FY05: Data received from 14 districts; errors and spatial inconsistencies resolved for three districts; assisted NOAA with specific data requests.**



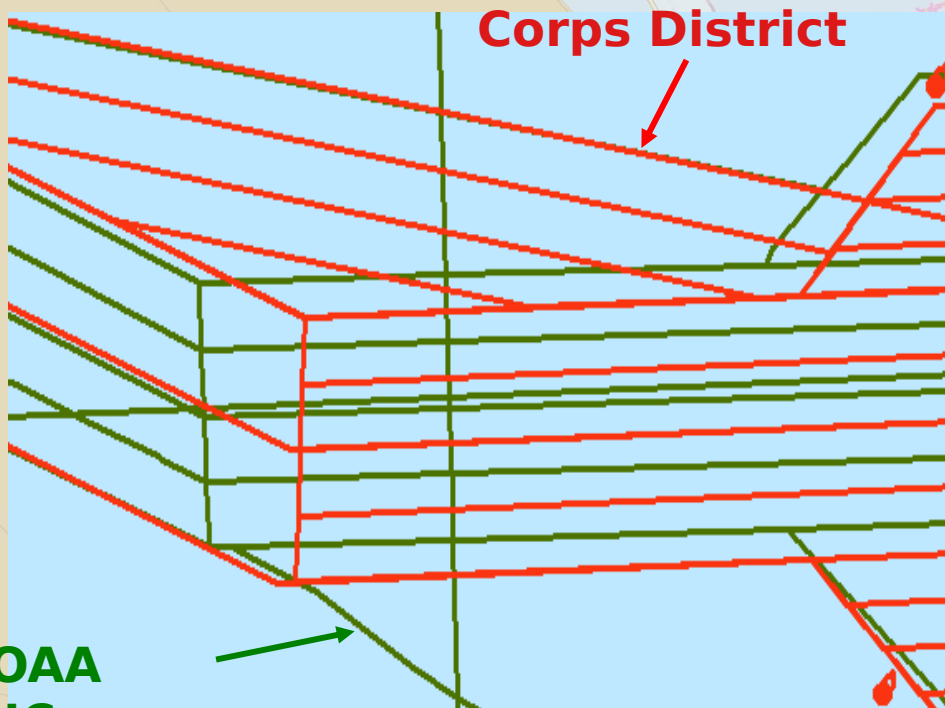
Coastal Data



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**Sample channel
discrepancy
between NOAA chart
and Corps data**

- FY06: Continue “fixing data” and building channel framework using SAM expertise gained with e-Coastal initiative.**



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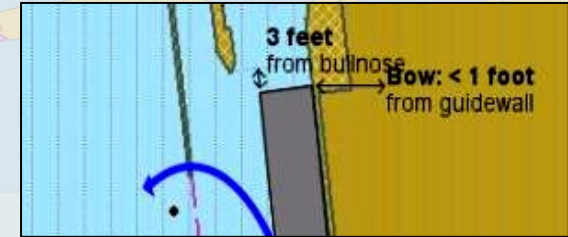


Port of Pittsburgh
Commission

SMARTLOCK

Instrumented Locking System for Inland Waterway Navigation; enables all-weather transit

- requires sub-meter accuracy for lock transit
- USACE establishing RTK GPS broadcast at upper 3 locks on the Ohio
- IENCs currently 2m (95% CEP) accuracy for fixed structures, including locks;
 - IENC refined for SMARTLOCK test areas



Port of Pittsburgh and SMARTLOCK partner now seek an operational system, with the Ohio, Mon, Kanawha Corps providing;

2. RTK GPS broadcast for all Ohio, Mon, Kanawha locks.

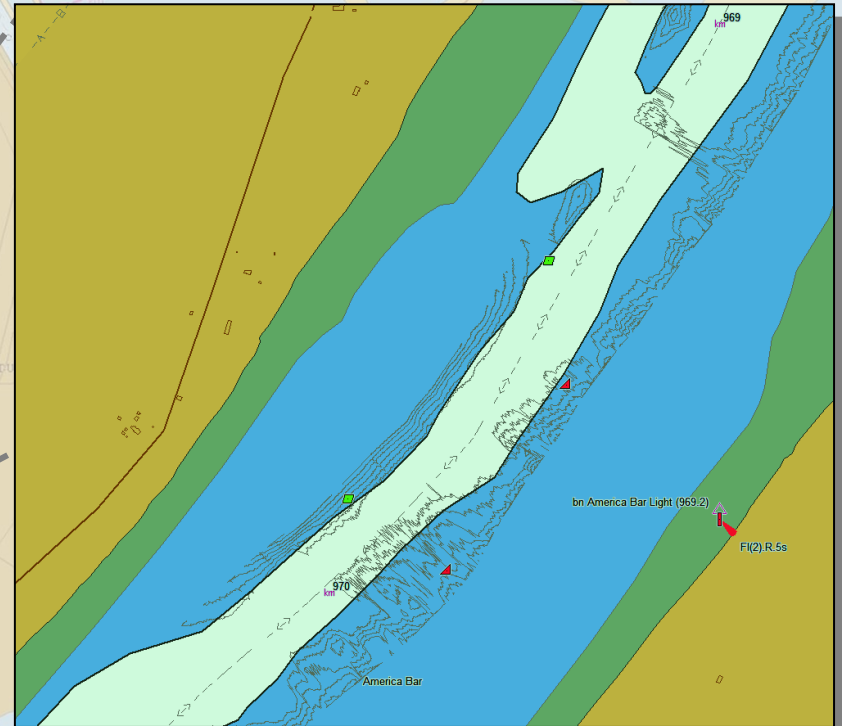
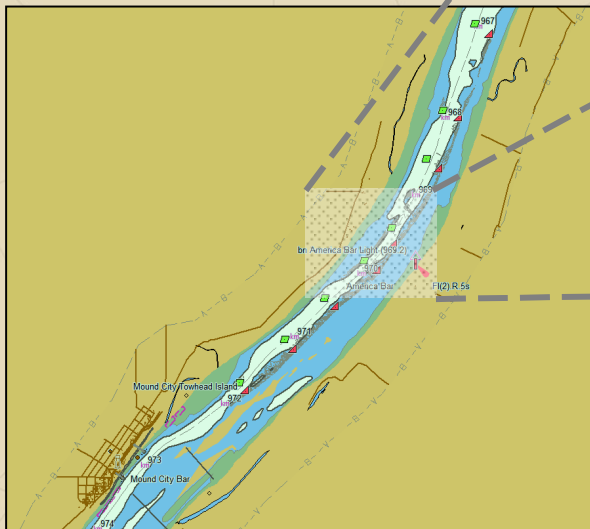


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Shoaling overlays developed during extreme low water conditions on Ohio in August; demonstration on Coast Guard river tenders and industry vessels being pursued.



Lower Ohio River



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Cooperative Charting Agreement With U.S. Power Squadron

U.S. Power Squadron, recreational boating organization promoting safety, is to perform field checks and report errors or inaccuracies in IENCs, similar to the cooperative charting arrangement with NOAA.

Field checks and observations to include the following features:

Non-navigable
river or
tributary

Land Region

Bridge

Overhead
pipeline

Light

Overhead
cable

Permanently
moored vessel

Storage tank

Support pylon

River Gauge

Marina

Dock/wharf

Conveyor

Marine
fender

Submarine
cable

Revetment

Boat ramp

Mooring
facility

Wrecks

Day mark

Ferry route



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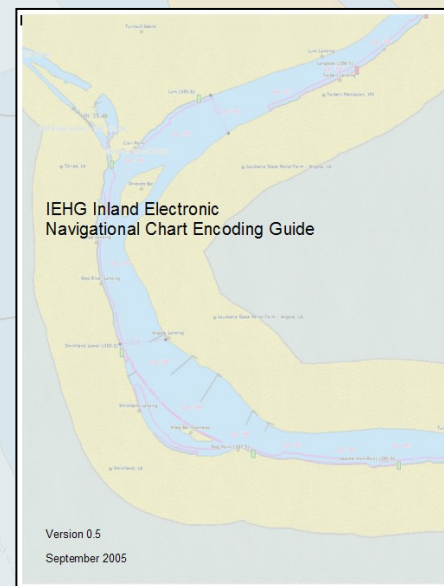


Inland ENC
Harmonization Group



Oct 05 - IEHG completes harmonized Inland ENC Data Standard, based largely on USACE Encoding Guide

- IEHG document formally released at COMPRIS Conference in Rotterdam,
- IEHG document is now a model Inland ENC Register, with broader participation invited,
- Inland ENC Register to be incorporated into S-100 under the International Hydrographic Office



International Coordination



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The Revolting Dredgers An update;

- **Origin:** meeting was held 26 May at Corps HQ to discuss hydrographic survey standards issues raised by dredging and survey contractors.
- **Summary:** dredging contractors frustrated over non-standard, ambiguous, and incorrect hydro survey practices in support of dredging among Corps offices, with both in-house surveys and contract specifications; *majority of issues arose from Corps districts not specifying or not following Hydro Survey EM.*
- **First Step:** contractors and Corps personnel agreed to dialogue the issues and propose solutions through the new Hydro Survey Community of Practice (HSCoP).
- **Result:** The HSCoP discussed issues at the annual Multibeam Users Group Meeting, 3 Nov. and generally concluded;
 - *contract specs sometimes poorly written and/or poorly enforced,*
 - *some incorrect or contradictory guidance in the EM,*

Hydro Survey CoP



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*Thank you for your attention
Questions?*



Stumpf Island
○